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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/067,255	02/07/2002	Alexander D. Stoyen	110344.101US2	6624

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EXAMINER

BOOKER, KELVIN E

ART UNIT	PAPER NUMBER
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2121

DATE MAILED: 03/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/067,255

Applicant(s)

STOYEN, ALEXANDER D.

Examiner

Kelvin E Booker

Art Unit

2121

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-45 is/are rejected.
- 7) ☒ Claim(s) 1-45 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☒ Other: Detailed Office Action.

DETAILED ACTION

Response to Amendment

1. In Amendment "A", filed December 24, 2003 (see paper no. 4), claim 5 has been amended and claims 1-45 are presented for further examination.

Terminal Disclaimer

2. The terminal disclaimer filed on December 24, 2003 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of U.S. Patent No. 6,360,193 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Response to Arguments

3. Applicant's arguments with respect to **claims 1-45** have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

4. **Claims 1-45** are objected to because the claims are replete with typographical and grammatical errors (e.g., see claims 37 and 38). Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. **Claims 1-45** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The terms “*immediate certainties*”, “*near certainties*” and “*long-term possibilities*” in **claims 1 and 43-45** are relative terms which render the claims indefinite. The terms are not defined by the claims, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Claims 1 and 43-45 provide for the use of a method of decision making in an aerial combat situation comprising the steps of *configuring data*, *processing a combat situation* and *implementing a decision*, but, since the claims do not set forth any steps involved in the methods/processes, it is unclear what methods/processes applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Further, **claims 1 and 43-45** are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, and elements, such omission amounting to a gap between the steps and elements essential in enabling the decision making process. See MPEP § 2172.01. The omitted steps include processes required in configuring a tactical agent, and implementing the decision making processes. The omitted elements include data and specifications necessary for providing a basis for performing the configuration and processing procedures.

Claim Rejections - 35 USC § 101

7. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

8. **Claims 1-45** are rejected under 35 U.S.C. 101 because the invention as disclosed in claim one is directed to non-statutory subject matter. While the claims are in the technological arts, they are not limited to practical applications in the technological arts.

Specifically, the claims focus on a series of steps to be performed on a computer, but the idea is disclosed abstractly from any particular practical application. **Claims 1 and 43-45** are directed towards a means and method for decision making in an aerial combat situation comprising the steps of *configuring data, processing a combat situation and implementing a decision*. However, the claims fail to provide the steps necessary to enable the claimed processes.

Further, **claim 44** focuses on an *intelligent agent system*, wherein the elements are recited in means plus function format, and the claim fails to define a statutory specific machine. A machine or manufacture or system claim may be one of two types: (1) a claim that encompasses any and every machine for performing the underlying process or any and every manufacture that can cause a computer to perform the underlying process, or (2) a claim that defines a specific machine or manufacture. When a claim is of the first type, Office personnel are to evaluate the underlying process the computer will perform in order to determine the patentability of the product.

The mere fact that a hardware element is recited in the claim does not necessarily limit the claim to a specific machine or manufacture. If a product claim encompasses any and every computer implementation of a process, when read in light of the specification, it should be examined on the basis of the underlying process. Such a claim can be recognized, as it will define the physical characteristics of a computer or computer component exclusively as functions or steps to be performed on or by a computer, and encompass any and every product in the stated class, configured in any manner to perform the process.

Claims that define a computer related invention as a specific machine or specific article of manufacture must define the physical structure of the machine or manufacture in terms of its hardware or hardware and "specific software." The applicant may define the physical structure of a programmed computer or its hardware or software components in any manner that can be clearly understood by a person skilled in the relevant art. Generally a claim drawn to a particular programmed computer should identify the elements of the computer and indicate how those elements are configured in either hardware or a combination of hardware and specific software.

To constitutionally interpret the word "process", the Supreme Court has held that: "**** A process is a mode of treatment of certain materials to produce a given result. It is an act, or a series of acts, performed upon the subject matter to be transformed and reduced to a different state or thing. ***The Process requires that certain things should be done with certain substances, and in a certain order; but the tools to be used in doing this may be a secondary consequence." (emphasis added) *Diamond, Commission of Patents and Trademarks v. Diehr and Lutton*, 209 USPQ 1, 6 (1981) quoting *Cochrane v. Deener*, 94 U.S. 780, 787-788 (1876).

This Constitutional interpretation of the word “process” is a long-standing one that the Supreme Court requires to be applied in interpreting 35 USC 101. *Diamond v. Diehr* at 6. Consequently, the use of that interpretation is Constitutionally required when we interpret the Federal Circuit’s standard that a “new and useful process” is one that produces a useful, concrete, and tangible result”. Cf. *State Street Bank & Trust Co. v. Signature Financial Group, Inc.*, 47 USPQ2d 1596, 1600-1601 (Fed. Cir. 1998).

Applicant discloses no “certain substances” that have been “transformed or reduced” in that applicant’s claims disclose no specific computer-readable medium, no manipulation of specific data representing physical objects or activities (pre-computer activity), nor do they disclose any specific independent physical acts being performed by the invention (post-computer activity).

The claims merely manipulate abstract ideas in general without limitation to a practical application where “certain substances” are transformed or reduced.

Conclusion

9. The following prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

A. Alexander et al., “A Mission Management System Architecture for Cooperating Air Vehicles”;

B. Bonissone et al., “Merging Strategic and Tactical Planning in Dynamic, Uncertain Environments”;

C. Stilman, “Heuristic Networks for Concurrent Pursuit-Evasion Systems”;

D. Nagy et al., "Intelligent Internetted Sensor Management Systems for Tactical Aircraft";

E. Berning et al., "Adaptive Tactical Navigation Denouement";

F. Atkins et al., "Solus: An Autonomous Aircraft for Flight Control and Trajectory Planning Research";

G. Chandler et al., "Research Issues in Autonomous Control of Tactical UAVs";

H. Bailey et al., "Performance of Integrated Air Defense Systems";

I. McCauley-Bell et al., "Uncertainty Management in Information Warfare"; and

J. Ozimina et al., "Flight Control System Design for a Small Unmanned Aircraft".

10. An inquiry concerning this communication or earlier communications from the examiner should be directed to Kelvin Booker whose telephone number is (703) 308-4088. The examiner can normally be reached on Monday-Friday from 7:00 AM-5:30 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anil Khatri, can be reached on (703) 305-0282. The fax number for the organization where this application or proceeding is assigned is (703) 872-9306.

An inquiry of a general nature or relating to the status of this application proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

K.E.B.

Art Unit 2121

March 16, 2004

Ramesh Patel
RAMESH PATEL
PRIMARY EXAMINER 3/19/04
For Anil Khatri